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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
WERNER, DAVID N	
ART UNIT	PAPER NUMBER
2621	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/705,938	ISHII, YOSHIKI	
	Examiner	Art Unit	
	David N. Werner	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) *10-14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 15-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20040218, 20070105*.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species:

I. The species of figure 2 (claims 10-12)

II. The species of figure 7 (claims 13 and 14)

III. The species of figure 8 (claims 15-17)

The species are independent or distinct because claims 10-17 show various embodiments as illustrated in figures 2, 7, and 8.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1-9 and 18-25 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. See MPEP § 809.02(a).

2. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction were not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

3. During a telephone conversation with Mark Williamson on 19 March 2007 a provisional election was made with traverse to prosecute the invention of figure 8, claims 15-17. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10-14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

5. The information disclosure statement filed 05 January 2007 fails to comply with 37 CFR 1.98(a)(1), which requires "a list of all...information submitted for consideration by the Office". The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered. Specifically, there is no listing of the Office action for the corresponding Japanese application.

Specification

6. The abstract of the disclosure is objected to because it exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

7. The disclosure is objected to because of the following informality: paragraph [0016] describes figure 2 as a "first embodiment", paragraph [0021] describes figure 7 as a "third embodiment" and paragraph [0022] describes figure 8 as a "fourth embodiment", but there is no indication of a second embodiment of the present invention.

Appropriate correction is required.

8. The disclosure is objected to because the statement in paragraph [0029] of the specification in the present application that recording medium 110 may be a generic recording medium "such as an optical disk or a magnetic tape" prevents the "recording means" of claim 8 and claim 18 to be limited to a Mini DV recorder according to 35 U.S.C. 112, sixth paragraph. However, since the rest of the specification indicates that the invention records on tape, the deficiency in the specification is not so much as to fail to disclose adequate structure to define the recording means of the invention, and so no rejection is made under 35 U.S.C. 112, first paragraph or second paragraph. See MPEP 2181.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 1-9 and 15-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The statement in paragraph [0081] that "program code itself constitutes an embodiment of the present invention" indicates that at least the "compression means" in generic claim 1 and claim 18 may be embodied as software, and the statement in paragraph [0080] that "the foregoing preferred embodiments" may be implemented as software indicates that at least the "compression means" of species claim 15 may be implemented as software. Considering the amount of direction provided, **no** detail is given to components of a software embodiment of the present invention. Considering the lack of a working example, as the drawings and a vast majority of the disclosure only describe a hardware embodiment of the invention comprised of various circuits, it is unclear how this disclosure enables one of ordinary skill in the art at the time the invention was made to make and use a pure software version of the present invention without undue experimentation. Therefore, the disclosure is only considered enabling for hardware embodiments. See MPEP 2106.02.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. Claims 1-9 and 15-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Although paragraph [0082] states that program code for a software embodiment of the present invention may be stored in computer-readable media, and paragraph [0083] states that program code for a software embodiment of the present invention is executable, thus placing a software embodiment of the present invention in statutory form, the statement in paragraph [0081] that the program code may be propagated on carrier waves, which have been held as non-statutory, places a software implementation of the present invention in non-statutory form. See *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 112-14 (1853).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 1-3, 7, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Disclosure Publication DE 10,035,109 A1 (Cho et al.), relying on corresponding US Patent 6,956,971 B1 for translation.

Although claim phrases like "compressing means" and "control means" usually provide significant structure to limit claims to hardware embodiments with specialized

circuitry such as an ASIC, the statement in paragraph [0080] that a software embodiment may be installed in a computer embedded in a specialized apparatus indicates that components of the present invention such as compression encoder circuit 103 may be realized as a general-purpose microprocessor or CPU. Then, according to 35 U.S.C. 112, sixth paragraph, the "compressing means for compressing...data" in claim 1 and claim 15 will be limited to an MPEG encoder, as stated in paragraph [0066] of the specification.

Cho et al. teaches a system that transmits a moving picture and still pictures extracted from the moving picture in a higher quality than the frames in the moving picture. The system may use an MPEG encoder (column 13, line 42). Regarding claim 1 and claim 15, in one embodiment of Cho et al., as shown in figure 4, channel buffer 303 buffers moving pictures, and bitstream memory 304 buffers still pictures (column 6, lines 40-44). While buffer 303 transmits a frame of a moving picture within 300 ms (column 6, lines 65-66) or 100 ms (column 7, lines 2-3), if bandwidth is limited to 64 Kbps, a 300 Kb still picture cannot be stored in 64 Kb buffer 303 (column 7, lines 11-13). A 300 Kb still picture may be stored in memory 304 for 5 seconds while being transmitted over a 64 Kbps channel (column 7, lines 51-54). A user may choose to set the quality of a still picture according to transmission time (column 7, lines 54-60). Cho et al. also includes core part 300, which compresses the moving pictures (column 6, line 31). Since still pictures are extracted from motion pictures, they are compressed using the same technique. Core part 300 responds to a user control signal to extract a still picture (column 7, lines 46-49), and a still picture is encoded with a fixed quantizing

value. This is in contrast with moving pictures, which are encoded with varying quantizing values (column 7, lines 30-34). Regarding claim 2 and claim 17, core part 300 is similar to core part 210 in the "background art" apparatus shown in figure 2. This core part includes a motion estimator 206 and motion compensator 205, which create inter frames (column 1, line 66). Regarding claim 3, the quantizer value for a still picture is lower than the quantizer value for a moving picture (column 7, lines 32-34). Regarding claim 7 and claim 17, still pictures are encoded as I-frames (column 5, lines 57-65).

Cho et al. discloses the claimed invention except Cho et al. holds encoded still pictures in a memory, and in the present invention, still pictures are held in a memory before compression. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to reverse a still-image memory and an encoder, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. See *In re Einstein*, 8 USPQ 166.

15. Claims 4-6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho et al. in view of Japanese Patent Application Publication 2000-050263 A (Asada et al). Asada et al. discloses an image encoder that can both encode moving MPEG images and still JPEG images. Regarding claim 4, figure 7 shows a quantizer shared by an MPEG encoder and a JPEG encoder [0040]. The quantization Q for each DCT value in a block is given by the formula $Q = \frac{16 \times D_{(i,j)}}{Qs \times W_{(i,j)}}$, where D is the DCT

coefficient for frequency (i,j), Qs is the quantization characteristic, and W is the value in a quantization matrix for frequency (i,j) [0041]. Regarding claim 5, Qs controls the number of "generating signs", or non-zero quantization values. The examiner takes Official Notice that it is well known in the art that adjusting a quantization step size changes the quality of a compressed image. Since Qs is in the denominator of the formula for quantized value Q, a smaller value of Qs yields a higher value for Q, particularly in higher-frequency AC DCT values, and increasing the quality of the compressed image. Note that the phrase "dosage child-ized table" throughout the provided machine translation of Asada et al. such as in paragraph [0048] is a mistranslation of the phrase "quantization table", and has no meaning regarding quantization step size. Regarding claim 6, MPEG processing and JPEG processing use different quantization tables. Figure 10 shows an embodiment of Asada et al. in which two quantization tables are stored in a memory [0045]. In MPEG processing, field A stores an Intra quantization table, and field B stores an Inter quantization table [0046]. In JPEG processing, field A stores a Luminance quantization table, and field B stores a Chrominance quantization table [0048]. Regarding claim 16, the quantization tables are stored in a memory [0046].

Cho et al. discloses the claimed invention except for quantizing images according to a quantization matrix, and storing a quantization factor in a memory. Asada et al. teaches that it was known to quantize JPEG and MPEG images with quantization matrices in a memory. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to quantize images according to a

memory-stored matrix as taught by Asada et al., since Asada et al. states in paragraph [0050] that such a modification would decrease the time to switch between a moving-image mode and a still-image mode.

16. Claims 8, 9, 18-21, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho et al. in view of US Patent 5,712,947 A (Oguro et al.), cited in the Information Disclosure Statement dated 18 February 2004. Cho et al. teaches a system for transmitting still images and moving images over a computer network, but does not teach recording images. Oguro et al. teaches a videotape with dynamic images and static images, wherein the static images are recorded with ID signals, and a videotape recorder/reproducer (VTR). Regarding claims 8 and 18-20, figure 18 of Oguro et al. shows a VTR with recording amplifier 17 which records data on tape (column 7, line 13). ID addition circuit 15 adds an ID to each data block (column 7, lines 4-7). The ID signal may be used to search for static images or dynamic images (column 2, lines 20-29). Regarding claims 9 18, and 20, in Cho et al., multiplexer 305 chooses whether to transmit a moving picture o a still picture (column 6, lines 45-47). Regarding claim 21, the multiplexer of Cho et al. is controlled by a user control signal (figure 4). Regarding claim 25, Cho et al. encodes still pictures as I-frames (column 5, lines 57-65). Cho et al. discloses the claimed invention except for recording the still images and moving images with identification. Oguro et al. teaches that it is known to record images in a videotape with ID signals. Therefore, it would have obvious to one having ordinary skill in the art to record images with ID signals as taught by Oguro et al., since

Oguro et al. states in column 1, lines 40-43 that such a modification would allow for a quick search of static images.

17. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho et al. in view of Oguro et al. as applied to claim 18 above, and further in view of Asada et al. Claims 22-24 encompass the same limitations as claims 4-6 as discussed above, but are dependent on claim 18, rather than claim 2.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- US Patent 5,025,482 (Murakami et al.)
- US Patent 5,430,556 A (Ito)
- US Patent 5,802,213 A (Gardos)
- US Patent 5,832,129 A (Horiuchi et al.)
- US Patent 5,875,266 A (Fukuda et al.)
- US Patent 6,222,881 B1 (Walker)
- Japanese Patent Application Publication 2000-187477 A (Abe) with corresponding US Patent 6,618,491 B1

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David N. Werner whose telephone number is (571) 272-

9662. The examiner can normally be reached on Monday-Friday from 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DNW

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